

# Constitution, Viability and Productivity of Buttocksed Lambs in the Conditions of Karakalpakstan

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**Annotation:** This article examines the constitution, viability and productivity of buttocksed, hisari, endemic and hybrid lambs in Karakalpakstan conditions and recommends selection elements aimed at increasing the number of sheep.

**Key words:** Genuses, constitution, productivity, viability, selection

**Introduction.** The constitutional types of animals are one of the important features that determine the individuality of a particular animal and are related to their productivity. The constitutional types of animals are among the main selection traits that determine their selection traits, their adaptability to external environmental conditions, their degree of productivity to a certain extent and their viability.

The constitutional types of animals and their effects on productivity, importance in selection work have been studied by a large number of banned scientists.

A number of scientists in the field [79; 73-77 b., 80; 48-50 b., 81; 591 b., 124; Pp. 245-248] draws conclusions about the importance of constitutional types based on the study of the levels of development of the meat, skin, wool and internal organs of sheep in different directions. Among the types of constitutions, special emphasis is placed on the constitutional type of strong animals. This is due to the fact that the body of animals of this constitution type has a well-balanced structure, durability, rapid flexibility, strong bone structure, well-developed muscle tissue, thin and dense skin, well-formed wool.

Animals of this strong type are resistant to external environmental conditions, mobile, more resistant to disease, more flexible, and suitable for use in selection work.

**Methods.** 3 groups were formed to determine the growth, development and meat and fat productivity of sheep from birth to 1.5 years of age.

For each of the 3 groups of animals in the experiment, the 1st group consisted of hybrid lambs belonging to the local endemic genus and the 2nd group consisted of hisari lambs brought from the Kashkadarya region (2016-2017) which are hybrids of endemic and hisari lambs. All 3 groups were under the same feeding and storage conditions.

**Results of experiment.** The distribution of buttocksed sheep in group 3 by constitutional types in our experimental work is summarized in Table 1 below.

**Table 1**  
**Constitution of lambs %**

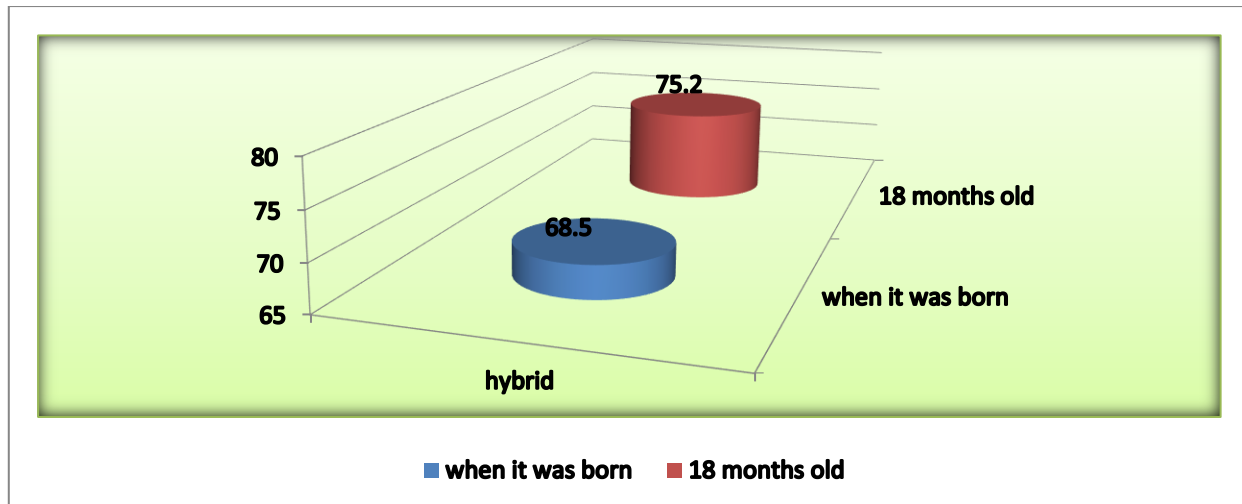
Genuses	When it was born		
	X±Sx		
	Weak	Strong	Rough
Endemic n=36	11,2±1,09	53,5±4,7*	35,3±3,1*
Hisari n=32	9,6±0,17*	66,8±6,2	23,6±2,2*
Hybrid n=29	10,7±0,10*	68,5±6,5	20,8±1,9
At 18 months old			
Endemic n=36	14,7±1,3*	53,9±4,3	31,4±3,1*
Hisari n=32	11,2±1,1	69,3±6,6*	19,5±1,8
Hybrid n=29	9,5±0,8*	75,2±6,9	15,3±1,2

\*p<0,001

According to the analysis of the data in Table 1, constitution types were distributed differently at the time of birth of buttocked lambs with different genotypes.

The majority of lambs in the study groups had a strong constitutional type (53.5–69.3%), while rough constitutional grouped lambs ranked intermediate in this indicator. Lambs of the endemic genus accounted for  $53.5 \pm 4.7\%$  of animals of the stable type at birth, compared with  $53.9 \pm 4.3\%$  of those at period of 18-month-old rams.

Constitutional differences were not almost seen in endemic animals. In hybrids derived from hisari and endemic genuses, the strong type of animals at birth was  $68.5 \pm 6.5\%$ , while at 18 months the figure was  $75.2 \pm 6.9\%$ .



**Picture 3.1.2. Differences in age dynamics of hybrid strong type lambs**

Thus, an increase in age dynamics was observed in hybrid animals by 6.7%. This situation is characterized by a positive change in the number of hybrid-derived offspring in the 18-month period of growth of strong-type animals compared to the neonatal period. Therefore, one of the tasks before us is to study the viability of buttocked sheep comparatively. Taking into account the actuality of this issue, the aim was to study the viability of the hisari buttocked thoroughbred, local endemic sheep and their hybrid offspring brought to the Republic of Karakalpakstan and the results of the study are presented in Table 2 below.

**Table 2  
 Viability of lambs %**

Genus	Sex	Taken into account									
		In the newborn period		During the lambing period		At the age of 1		At the age of 1.5		At the age of 2.5	
		n	%	n	%	n	%	n	%	n	%
Endemic	Female	61	100	61	100	60	98,3	60	98,3	59	96,7
	Male	55	100	55	100	Submitted for meat					
Hisari	Female	59	100	59	100	59	100	59	100	58	98,3
	Male	48	100	48	100	Submitted for meat					
Hybrid	Female	44	100	44	100	44	100	44	100	44	100
	Male	39	100	39	100	Submitted for meat					

The number of sheep has increased and in some years has decreased in the Republic of Karakalpakstan in the last 10 years. Taking into consideration this situation our experimental work is devoted to emphasis this issue.

The analysis of the data in Table 2 shows that in all groups there were no cases of forced slaughter of lambs or death due to other reasons until the lambing period. In 2.5-year-old rams of different genotypes, the

survival rate varied from 96.7% in the endemic breed, 98.3% in the hisari breed and 100% in the hybrid offspring and compared to the endemic breed it is 3.3% more than endemic type, and 1.7% over the hisari breed. Thus, based on the results of the experiment we can see that in the conditions of Karakalpakstan, the buttocked sheep of the hisari breed brought from Kashkadarya and the hybrid offspring obtained from them show that their viability is high.

The fertility of buttocked sheep plays an important role in increasing the number of sheep and the quantitative indicators of productivity consequently. Data on the experimental results on the fertility characteristics of our buttocked sheep are given in Table 3.

An analysis of data from a large number of researchers shows that the main factors in the differences between buttocked sheep breeds are the formation of constitution types, the improvement of productivity indicators, and their dependence on the level of fertility. The fertility rate of buttocked sheep is also related to their viability, rapid maturation, and twin-breeding characteristics. The results of our fertility research are summarized in Table 3.

**Table 3**  
**The productivity rate of buttocked sheep %**

Genuses	Number of sheep being kept for breeding	Percentage	The resulted generations	Percentage
Endemic	85	100	87	102,3
Hisari	79	100	85	107,6
Endemic x Hisari	73	100	77	105,5

According to Table 3, the fertility rate of local breeds is 102.3%, while the fertility rate of hisari rams with storage resources and endemic sheep is 107.6 and 105.5%, respectively.

To conclude, hisari sheep brought from Kashkadarya region showed good flexibility in the conditions of Karakalpakstan and the fertility rate of productivity increased by 3.2% compared to purebred sheep when the rams of this genus was interbred with endemic sheep.

### Conclusion.

High viability and fertility of hybrid offspring obtained from interbreeding of hisar rams with local endemic sheep was observed in Karakalpakstan conditions. It is advisable to use these indicators in selection work.

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